

District Name/LEA \_\_\_\_\_

## Grade 6

## Mathematics

## Performance Based Assessment Practice Test

[illegible]

**C** Place the Student ID Label Here

**D** Gender  
☐ Female ☐ Male

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		<input type="radio"/>	Dec				

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1. **Introduction**  
 2. **Background**  
 3. **Methodology**  
 4. **Results**  
 5. **Discussion**  
 6. **Conclusion**  
 7. **References**  
 8. **Appendix**  
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### Directions for Completing the Answer Grids

1. Work the problem and find an answer.
2. Write your answer in the boxes at the top of the grid.
  - Print only one digit or symbol in each box. You may not need all the boxes to enter an answer, but do not leave a blank box in the middle of an answer.
3. Under each box in which you wrote your answer, fill in the bubble that matches the number or symbol you wrote above.
  - Fill in one and ONLY one bubble for each box. Do not fill in a bubble under an unused box.
  - Fill in each bubble by making a solid mark that completely fills the circle.
  - Fractions cannot be entered into an answer grid and will not be scored. Enter fractions as decimals.
4. See below for examples on how to correctly complete an answer grid.

To answer  $-3$  in a question, fill in the answer grid as follows:

-	3				
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
<input checked="" type="radio"/>	3	3	3	3	3
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5	5	5	5	5	5
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9	9	9	9	9	9

To answer  $.75$  in a question, fill in the answer grid as follows:

.	7	5			
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	<input checked="" type="radio"/>	5	5	5
6	6	6	6	6	6
7	<input checked="" type="radio"/>	7	7	7	7
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9	9	9	9	9	9



# Unit 1 - Section 1 (Non-Calculator)

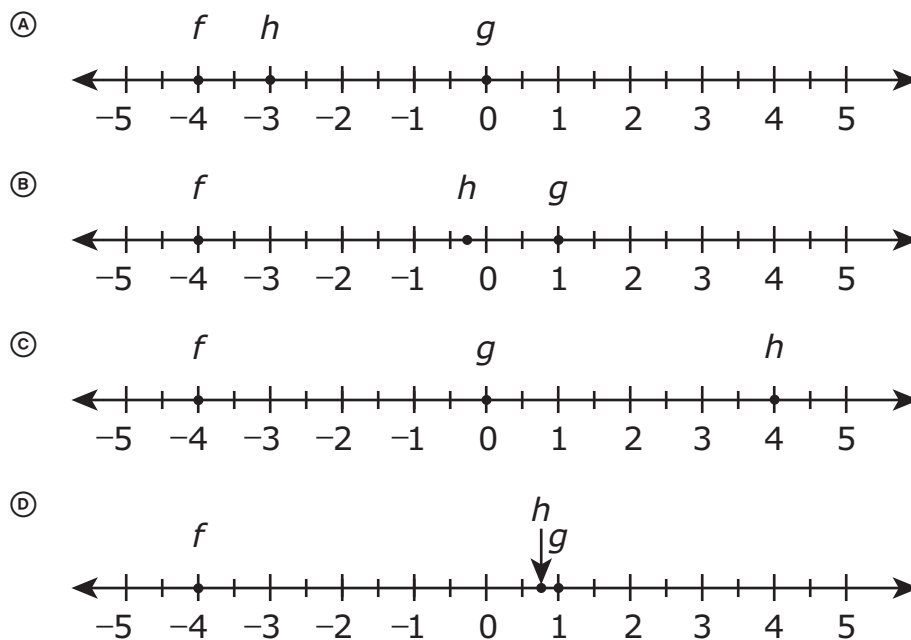
This unit has two sections: a non-calculator and a calculator section.

You will now take the first section of this unit in which you may not use a calculator. You will not be allowed to return to the non-calculator section of the test after you have started the calculator section. You will need to finish both sections within the allotted testing time.

**Once you finish the non-calculator section, read the directions in your Test Booklet on how to continue.**

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- $$\begin{aligned} f &= -4 \\ g &= -g \\ h &= -f \end{aligned}$$



3. The area of a rectangular patio is  $5\frac{5}{8}$  square yards, and its length is  $1\frac{1}{2}$  yards. What is the patio's width, in yards?

- Ⓐ  $3\frac{3}{4}$
- Ⓑ  $4\frac{1}{8}$
- Ⓒ  $7\frac{1}{8}$
- Ⓓ  $8\frac{7}{16}$

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5. Marshall took \$36.75 to a fair. Each ticket into the fair costs  $x$  dollars. Marshall bought 3 tickets. Which expression represents the amount of money, in dollars, that Marshall had after he bought the tickets?

- Ⓐ  $36.75 - (3 + x)$
- Ⓑ  $36.75x - 3$
- Ⓒ  $36.75(3) - x$
- Ⓓ  $36.75 - 3x$





- **If you have time, review your answers in the non-calculator section ONLY. You will not be allowed to return to the non-calculator section once you have received your calculator.**
- **Then, raise your hand to receive your calculator before going on to the calculator section.**



# Unit 1 - Section 2

## (Calculator)

Once you have received your calculator, continue with the calculator section.



- (A)  $x - 6$
- (B)  $6 \cdot x$
- (C)  $x + 6$
- (D)  $6 - x$

- Enter your answer in the box.

(-)					
	○	○	○	○	○
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

- Ⓐ  $x < 0$
- Ⓑ  $x > 0$
- Ⓒ  $x < 4$
- Ⓓ  $x > 4$



Use the information provided to answer Part A and Part B for question 9.

The ratio of the sales tax to the amount of a purchase is a fixed number in Town Q. The table shows the sales tax for a purchase of \$1,200.

**Town Q Tax**

Purchase	Sales Tax
\$1,200	\$72
\$2,500	?
?	\$108

**9. Part A**

What is the sales tax for a purchase of \$2,500?

- Ⓐ \$18.06
- Ⓑ \$34.72
- Ⓒ \$144.00
- Ⓓ \$150.00

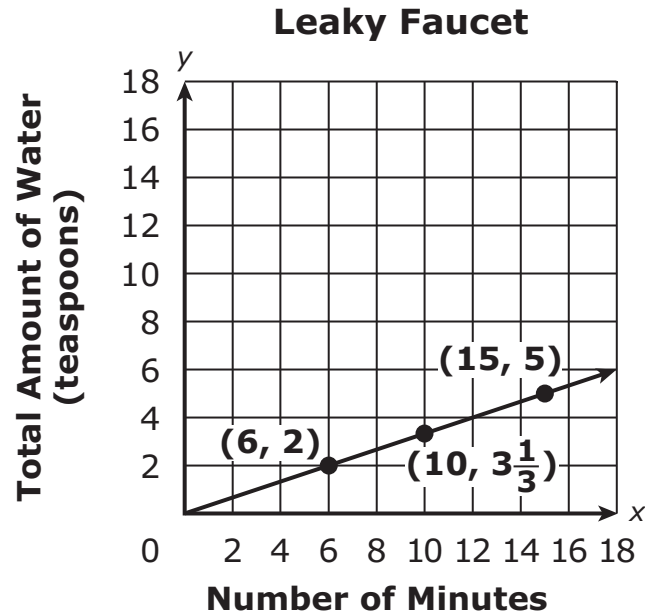
**Part B**

What is the cost of an item with a sales tax of \$108?

- Ⓐ \$432
- Ⓑ \$648
- Ⓒ \$1,092
- Ⓓ \$1,800



The graph shows the number of teaspoons of water,  $y$ , that have dripped from a leaky faucet at the end of  $x$  minutes.



Which equation represents the relationship between  $x$  and  $y$  shown in the graph?

- Ⓐ  $y = 3x$
- Ⓑ  $y = x - 3$
- Ⓒ  $y = \frac{1}{3}x$
- Ⓓ  $y = x + 3$



**Part B**

Based on the relationship shown in the graph, how many teaspoons of water will have dripped from the faucet at the end of 21 minutes?

Enter your answer in the space provided.



- 
- A coordinate plane is shown with a horizontal x-axis and a vertical y-axis. The x-axis is labeled 'x' at its right end, and the y-axis is labeled 'y' at its top end. A point  $R$  is marked on the y-axis, above the origin. A point  $P(n, 3)$  is marked in the first quadrant, to the right of the y-axis and above the x-axis.



Enter your answers and your explanations in the space provided.



12. A company makes yellow golf balls and white golf balls. The table shows the company's sales of yellow golf balls for the last 3 years.

**Yellow Golf Balls**

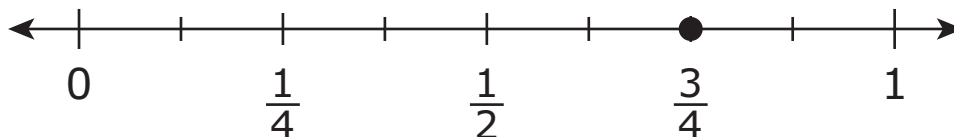
Year	Number of Yellow Golf Balls Sold
1	204,132
2	225,624
3	237,108

- The company expects sales of yellow golf balls to continue to increase in year 4.
- The company also expects the ratio of yellow golf ball sales to white golf ball sales in year 4 to be about 1 : 5.
- The average selling price of a box of 12 yellow or 12 white golf balls is \$23.94.

Estimate the company's total sales, in dollars, of golf balls in year 4. Show all your work. Explain how you determined your estimate.

Enter your estimate, your work, and your explanation in the space provided.

This diagram shows a number line.



James has a board that is  $\frac{3}{4}$  foot long. He wants to cut the board into pieces that are each  $\frac{1}{8}$  foot long.

How many pieces can James cut from the board? Explain how James can use the number line diagram to determine the number of pieces he can cut from the board.

Enter your answer and your explanation in the space provided.



**Part B**

Write an equation using division that represents how James can find the number of pieces he can cut from the board.

Enter your equation in the space provided.

A student filled a right rectangular prism-shaped box with one inch cubes to find the volume, in cubic inches. The student's work is shown.

A 3D cube is shown, composed of smaller cubes. The cube is 7 units high, 7 units wide, and 7 units deep. An arrow points to the top layer of the cube, which is labeled "Top layer (63 cubes)". The top layer is a 7x7 grid of cubes. The entire cube is composed of 343 smaller cubes (7x7x7).

- I packed my box full of cubes. Each cube has a volume of 1 cubic inch.
- I counted 63 cubes in the top layer.
- Since there are 9 layers of cubes below the top layer, I solved  $63 \times 9 = 567$ . So there are 567 cubes.
- The volume of my box is 567 cubic inches.



**14. Part A**

Explain why the student's reasoning is incorrect. Provide the correct volume, in cubic inches, of the box.

Enter your explanation and the correct volume in the space provided.

A second box also has a base area of 63 square inches, but it has a volume of 756 cubic inches.

What is the height, in inches, of the second box? Explain or show how you determined the height.

Enter the height and your explanation or work in the space provided.



**15. Part A**

A group of hikers buy 8 bags of trail mix. Each bag contains  $3\frac{1}{2}$  cups of trail mix. The trail mix is shared evenly among 12 hikers. How many cups of trail mix will each hiker receive? Show your work or explain your answer.

Enter your answer and your work or explanation in the space provided.



The hikers plan to visit a scenic lookout. They will rest after they hike 2 miles. Then they will hike the remaining  $1\frac{3}{4}$  miles to the lookout. The trail the hikers will use to return from the lookout is  $\frac{1}{2}$  mile shorter than the trail they will use to go to the lookout. Each hiker will bring  $\frac{1}{4}$  gallon of water for each mile to and from the lookout.

- Determine the total distance each hiker will hike. Show your work or explain your answer.
- Determine the total number of gallons of water each hiker will bring. Show your work or explain your answer.

Enter your answers and your work or explanations in the space provided.



- 16.** Brianna's teacher asks her which of these three expressions are equivalent to each other.

Expression A:  $9x - 3x - 4$

Expression B:  $12x - 4$

Expression C:  $5x + x - 4$

Brianna says that all three expressions are equivalent because the value of each one is  $-4$  when  $x = 0$ .

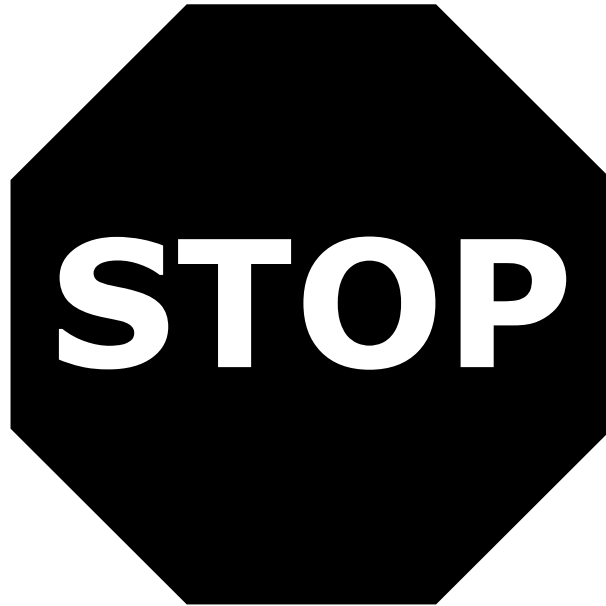
Brianna's thinking is incorrect.

Identify the error in Brianna's thinking. Determine which of the three expressions are equivalent. Explain or show your process in determining which expressions are equivalent.

Enter your answer and your explanation or process in the space provided.

- He will buy 5 small fish for every 10 gallons of water in the aquarium.
- He will buy 8 large fish for every 40 gallons of water in the aquarium.

Enter your answers and your work or explanation in the space provided.



**You have come to the end of the calculator section in Unit 1 of the test.**

- **Review your answers in the calculator section of Unit 1 only.**
- **Then, close your test booklet and raise your hand to turn in your test materials.**



**SERIAL #**



**Grade 6  
Mathematics  
Test Booklet**

***Performance Based Assessment  
Practice Test***